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# 2024 State of Curbs & Parking

## Trends, Challenges, and Technology Adoption

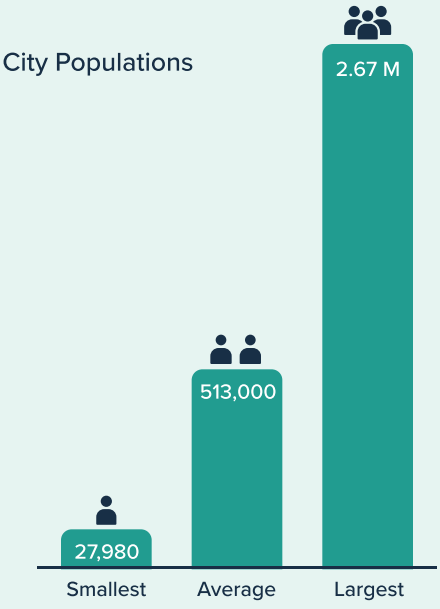
# Introduction

The management of curbs and parking is at a pivotal moment. As cities across North America grapple with increasing demands on curb space, the need for modern, data-driven solutions is more critical than ever. With the adoption of new sensor technology, open payment environments, and dynamic pricing schemes proliferating the market, cities are collecting more data than ever before. Yet, making sense of this data to drive operational efficiencies and policy decisions presents new challenges for city planners, parking directors, and transportation managers.

Parking and curb data have been collected for decades, from early coin-based parking meters to the modern digital systems that monitor every parking and curbside interaction. With the advent of LPR cameras, in-ground sensors, and digital payment systems, the volume of information cities manage has expanded exponentially. Yet, as the amount of data grows, so too does the need for integrated tools that transform this data into actionable insights, supporting more efficient and equitable management of curbside spaces.

As a leading software provider for curb and mobility management, Populus has a front row seat to the challenges cities face in adopting new technologies while managing competing priorities. We regularly field questions from cities eager to learn more about how they compare to their peers in terms of technology adoption and digital data management. This motivated us to conduct a survey of parking and transportation professionals across cities, large and small, in North America to understand the state of curb and parking management. Our goal is to explore key trends, challenges, and innovative solutions that cities and parking districts are using to enhance curb management practices.

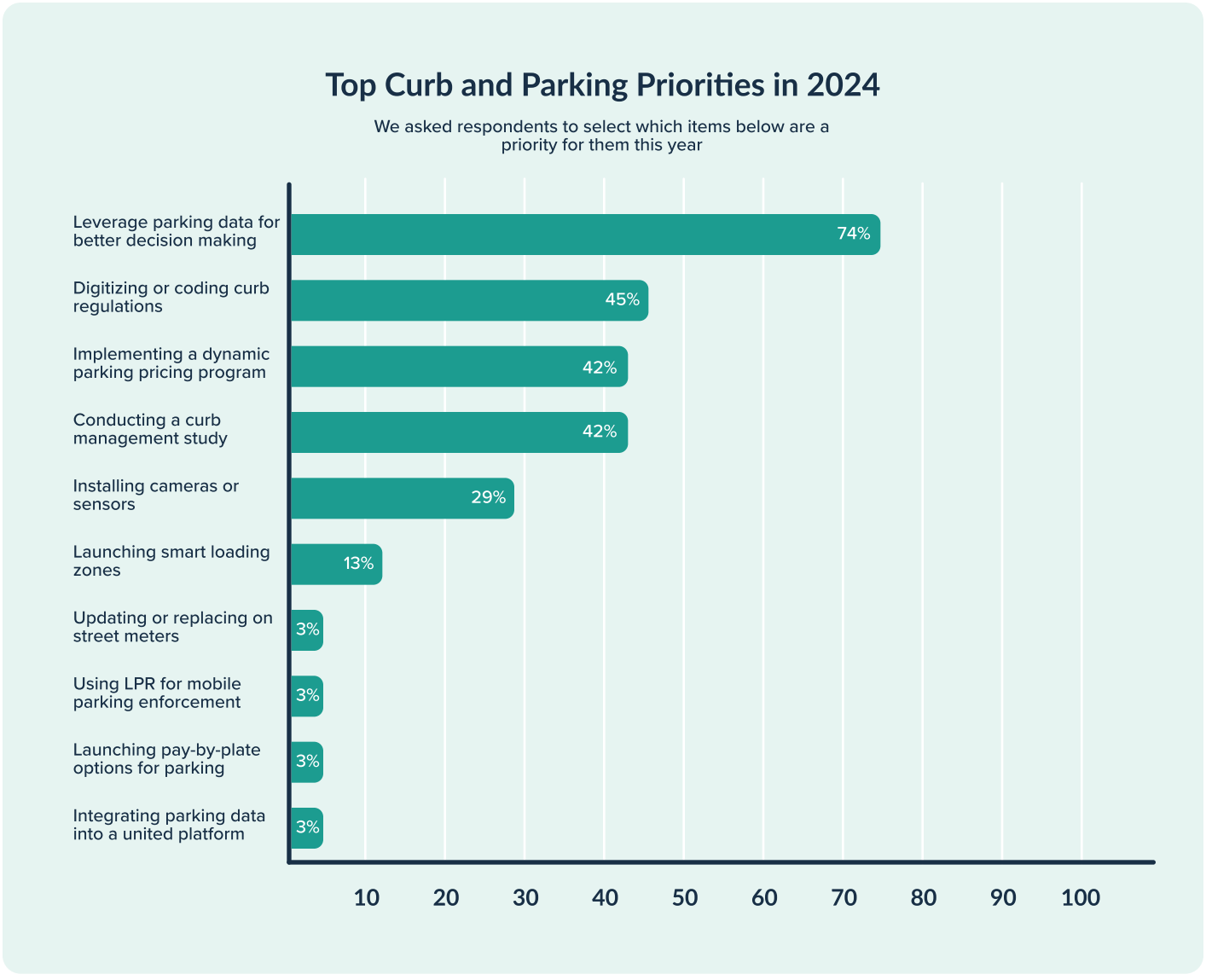
## Survey Response Audience

# Key Findings

Our survey identified several trends shaping the future of curbs and parking in North American cities:

- **Increased Demand for Curb Space:** Over 80% of respondents cited rising pressure from delivery services, ride-hailing, and shared mobility.
- **Curb Space Allocation Challenges:** Nearly 75% of cities indicated that allocating space to both commercial and non-traditional curb users remains one of their biggest challenges.
- **Technology Adoption:** While more than 60% of cities reported using some form of digital curb management solution, 74% are still working to leverage parking data for more informed decision making.
- **Parking Infrastructure Strain:** Many cities are still working to digitize their parking infrastructure, with 40% reporting ongoing efforts to improve parking payment systems and enforcement tools.



# Trends and Insights

## 1. Evolving Curb Space Dynamics

The rise of new mobility services such as delivery fleets, ride-hailing, and micromobility has dramatically altered the use of curb space. Survey results revealed that cities are facing significant pressure to accommodate these services while still managing traditional vehicle parking.

- **Delivery Services as a Top Priority:** 85% of cities stated that managing delivery vehicles is now a major challenge, particularly in densely populated areas. Cities like Miami and Portland reported implementing pilot programs for dedicated delivery zones.
- **Shared Mobility Pressure:** Respondents indicated that micromobility (such as scooters and bikesharing) has become a significant factor in curb space management, with over half the cities acknowledging issues related to parking compliance and safety.

## 2. Challenges in Data Access

Cities are beginning to embrace hardware solutions with greater regularity including various types of parking meters, cameras, and sensors. Survey respondents cited challenges in accessing this data and making sense of it as major hurdles to effective curb management.

- **Data Fragmentation:** 61% of respondents indicated that their cities' current data exists in a variety of fragmented systems or their individual department has zero visibility into the data. Many cities are working to close the gap in data access and emphasize the importance of real-time or near real-time access to information.
- **Actionable Data Insights:** Just 29% of respondents expressed satisfaction with their data analytics solutions, many citing the volume and complexity of data as a key challenge.

### Variety of Data Sources

Aggregating and analyzing data has become increasingly complicated as new sources of data become available

Parking Meters


Mobile Pay Apps

In-Ground Sensors

Cameras

License Plate Readers

## 3. Pricing: Limitations and Roadblocks

Curb space is one of the most precious resources a city has, yet most cities struggle to adequately capture revenue for use of this space. Historically underpricing this resource combined with legal limitations to change how rates are set make it incredibly difficult for cities to leverage their parking rates as a tool to shift behavior.

- **Limited Authority:** While over 90% of cities currently charge for on-street parking, only 29% are able to adjust parking rates without going through a lengthy legal process. And for the 10% that do not currently charge for on-street parking, they emphasized their struggle to quantify and prove the benefit of introducing paid parking areas with elected officials.

- **Fragmented Technology Systems:** As cities embrace dynamic pricing as the future of parking pricing, many face challenging coordination of a fragmented stack of technologies to execute their vision. Only 12% of cities have an integrated system they can rely on for consolidation of data.

### Building a Digital Curb in Hoboken, NJ

**THE PROBLEM:**
Hoboken needed visibility into curb occupancy and intended use for curbs, but did not have a digital inventory in place to be able to adequately record and analyze these characteristics.

**THE SOLUTION:**
Populus and Kimley-Horn partnered to support in-field data collection to capture, digitize, and visualize data for every block face across the 1.5 square-mile city.

**THE RESULT:**
Hoboken now leverages Populus's Curb Manager to manage curb regulations and analyze curb supply and demand, allowing for novel evaluation of how curbspace allocation is performing against their city's goals.


## 4. Technology Adoption: Gaps and Opportunities

While technology has the potential to transform curb management, survey results suggest that many cities are still in the early stages of digital transformation.

- **Digitizing the Curb:** 70% of cities have started to digitize their curb management through inventory and mapping systems, but only 26% express confidence in a complete inventory of curb regulations. Despite achieving that complete inventory, cities like Boulder know that maintenance and data updates remain a challenge.

- **Parking Solutions:** Many cities still rely on traditional methods for parking enforcement and payment. However, 30% of cities reported a move toward mobile-based payment systems, and 25% indicated that they were exploring camera-based enforcement.


## Chaos at the Curb

Data proves the pressure placed on city curbs has never been greater. **85% of cities** echoed this concern, stating that managing delivery vehicles is a major challenge they face.

Populus is working with cities like Miami and Oakland to manage digital smart zones – capturing commercial fleet activity and providing them new ways to pay for curb use.

City of Oakland

Miami Parking Authority

Access to this data can drive informed decisions and provide insights into when and where curbs are being used and for how long. These insights unlock important strategies for reducing congestion and double parking, improving turnover and dwell time.

# Challenges Facing Cities

Through this survey, several challenges were consistently identified:

- **Data and Visibility Gaps:** Over half the respondents reported a lack of reliable data to inform decision-making on curb usage and parking demand. The inability to track real-time usage of curb space, especially for short-term commercial deliveries, is a significant obstacle.

- **Equity Concerns:** Multiple cities raised concerns about how current curb regulations may inadvertently limit access to public spaces for underserved communities. Nearly 20% of cities cited equity as a priority issue for future curb management plans.

## Looking Ahead: Recommendations for Cities

Based on the findings from this survey, we propose several recommendations to help cities modernize and optimize their curb and parking management systems:

1. **Invest in Data-Driven Tools:** Cities should prioritize the integration of data aggregation systems that allow them to monitor and dynamically manage curb spaces.

2. **Pilot Programs with Clear Objectives:** Pilot programs remain a powerful tool for cities to test new curb solutions. However, these initiatives should have clearly defined success metrics and a plan for scaling successful pilots into formalized programs.

Update Regulatory Frameworks: Cities must modernize their regulations to accommodate emerging pricing schemes and curb use policies, while also addressing enforcement gaps.

# Conclusion

Our survey results shed light on how cities are navigating challenges and what innovative practices are emerging to meet the increasing demands of curbside management. At Populus, we are committed to helping cities make the most of their curb and parking data, unlocking new possibilities for improved efficiency, equity, and sustainability in urban mobility.

The 2024 Populus State of Curbs & Parking Survey has highlighted that cities across North America are facing similar challenges, from accelerating decision making to digitizing their infrastructure. As urban mobility continues to evolve, cities must take a proactive approach to curb management by leveraging technology, updating policies, and prioritizing data-driven strategies.

By sharing these insights, we hope to empower other cities and parking authorities to modernize their curb and parking operations, ensuring a more efficient, equitable, and sustainable future.

## About Populus

Populus helps city departments of transportation and parking authorities transform urban mobility by effectively managing ever-growing connected vehicle fleets and congestion in the public right-of-way. The Populus platform is the only comprehensive solution that helps cities code their curbs, aggregate parking data, and deploy digital smart zones to improve curbside management. Our first-of-its-kind GPS-enabled parking technology enables commercial fleets to pay for curbside usage through safe, frictionless payments. Populus is a trusted partner of over 100 cities around the world.

Learn more at **www.populus.ai**. If you have further questions or feedback, members of our team may also be reached at: contact@populus.ai